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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NGUYEN, TAM M	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/678,693	MURPHY ET AL.	
	Examiner	Art Unit	
	Tam M. Nguyen	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,8-11,15-18,20-23 and 25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,8-11,15-18,20-23 and 25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al. (5,951,848) in view of Kresge et al. (5,837,639) and either Benazzi et al. (6,884,339) or Carroll et al. (6,517,704).

Baker discloses a process for catalytic dewaxing a feedstock. The feedstock, which comprises about less than 5,000 ppm of sulfur compounds and about 50 ppm of nitrogen compounds, is first passed into a hydrotreating zone to remove nitrogen and sulfur compounds. The hydrogenating zone is operated at a temperature of from 300 to 450° C, at a pressure of from 6900 to 20700 kPa, at a LHSV of from 0.1 to 10 hr^{-1}, and at a hydrogen rate of from 200 to 800 SCF/Bbl (900 to 1800 m^3/m^3). The hydrotreating catalyst comprises nickel and tungsten. The effluent from the hydrotreating zone is entirely passed into a dewaxing zone containing a dewaxing catalyst including ZSM-48, a metal hydrogenation component (e.g., Pt or Pd). The dewaxing zone is operated at conditions similar to the hydrotreating zone. The product from the dewaxing zone is further treated in a hydrofinishing zone. (See col. 1, lines 9-20; col. 2, line 46 through col. 3, line 3; col. 4, line 14 through col. 5, line 29; col. 5, line 62 through col. 6, line 4; col. 8, line 1 through col. 10, line 47)

Baker does not specifically disclose that the effluent from the dewaxing step is passed into a hydrofinishing zone without disengagement, and does not disclose that the hydrofinishing catalyst is MCM-41.

Both Benazzi and Carroll disclose a hydroprocessing process wherein an effluent from the dewaxing step is directly passed into a hydrofinishing zone without disengagement. (See Benazzi col. 8, lines 36-38; Carroll col. 5, lines 53-57)

Kresge teaches the use of MCM-41 as a hydrotreating catalyst. (See col. 4, lines 57-68; col. 5, lines 1-16; col. 33, lines 33-37)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Baker by passing an effluent from the dewaxing step directly into a hydrofinishing zone without disengagement because both Benazzi and Carroll teach that it is advantaged to pass the entire dewaxed stream from the dewaxing stage to the hydrofinishing zone.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Baker by using MCM-41 as a hydrofinishing catalyst because Kresge teaches that MCM-41 is a highly effective hydrotreating catalyst.

Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiao et al. (6,264,826) in view of Kresge et al. (5,837,639) and either Benazzi et al. (6,884,339) or Carroll et al. (6,517,704).

Xiao discloses a process for preparing lubricating base oils from a sulfur containing feedstock. The feedstock is derived from a solvent extracting process wherein foots oils is prepared by separating oil from the wax. The foot oils, which comprises about 0.5 to 2.5 wt.% (5000 to 25,000 ppm) of sulfur compounds and about 50 to 2000 ppm of nitrogen compounds, is fed into a hydrotreating zone wherein nitrogen and sulfur compounds are removed. The hydrotreating zone is operated at a temperature of from 260 to 427° C, at a pressure of from less than 11 Mpa, at LHSV of about 0.5, and at hydrogen rate of about 722 m^3/m^3. The entire effluent from the hydrotreating zone is then fed into a dewaxing zone containing a dewaxing catalyst

including ZSM-5 and SAPO-11, a metal hydrogenation component (e.g., Pt or Pd). The dewaxing process is operated at temperature of from 400 to 900° F, at a pressure of from .45 to 20.8 Mpa, at LHSV of from about 0.1 to 5 hr^{-1}, and at hydrogen gas rates of from 89.1 to 1780 m^3/m^3. The product from the dewaxing zone is then passed into a hydrofinishing zone to provide a final product. (See col. 2, line 51 through col. 6, line 59; col. 8, line 53 through col. 10, line 40)

Xiao does not specifically disclose that the effluent from the dewaxing step is passed into a hydrofinishing zone without disengagement and does not disclose that the hydrofinishing catalyst is MCM-41.

Both Benazzi and Carroll disclose a hydroprocessing process wherein an effluent from the dewaxing step is directly passed into a hydrofinishing zone without disengagement. (See Benazzi col. 8, lines 36-38; Carroll col. 5, lines 53-57)

Kresge teaches the use of MCM-41 as a hydrotreating catalyst. (See col. 4, lines 57-68; col. 5, lines 1-16; col. 33, lines 33-37)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Xiao by passing the effluent from the dewaxing step directly into a hydrofinishing zone without disengagement because both Benazzi and Carroll teach that it is advantaged to pass the entire dewaxed stream from the dewaxing stage to the hydrofinishing zone.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Xiao by using MCM-41 as a hydrofinishing catalyst because Kresge teaches that MCM-41 is a highly effective hydrotreating catalyst.

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims 1-4 above, and further in view of either Lucien et al. (4,906,350) or Cody et al. (5,935,417)

Baker does not specifically disclose that the dewaxing zone comprises a second catalyst.

Both Lucien and Cody teach that ZSM-5 and/or ZSM-48 can be utilized in a dewaxing process. (See Lucien, claim 2; Cody; col. 7, lines 10-16)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Baker by using a second catalyst such as ZSM-5 because both Lucien and Cody teaches that ZSM-5 and ZSM-48 can be used as a dewaxing catalyst. It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose. *In re Kerkhoven* 205 USPQ 1069 (CCPA 1980).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims 20-23 above, and further in view of Cody et al. (5,935,417).

Xiao does not specifically disclose a step of blending a raffinate feedstock and at least one of a slack wax or foots oil.

Cody discloses a step of blending a raffinate feedstock with foots oil to form a blended feedstock. (See col. 5, lines 9-15)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Xiao by using the blend feedstock of Cody because any waxy feedstock can be used in the process of Xiao. Therefore, it would be expected that the blend feedstock would be successfully treated in the process of Xiao.

Response to Arguments

The argument that the Baker process does not operate in cascade with a cat dewaxer is not persuasive because the hydrotreating step of Baker can be operated by utilizing a hydrotreating catalyst (mono-functional catalyst) or a bifunctional catalyst (see col. 5, lines 62-65; col. 7, lines 57-65). Also, even if a mono-functional catalyst is used, the catalyst does not necessary to locate in the same reactor with the dewaxing catalyst. Furthermore, the modified process of the hydrotreating and the dewaxing of Baker are operated as the claimed process.

The argument that the dewaxing step of Baker utilized two catalyst systems whereas the present dewaxing step utilizing only one catalyst system is not persuasive. As discussed above the treating step and dewaxing step does not necessary to operate in the same reactor. Even if the two catalysts are located in the same reactor, there are still two zones in that reactor, which comprises a hydrotreating zone and a dewaxing zone. The dewaxing zone does not utilized hydrotreating catalyst and dewaxing catalyst, but the dewaxing step does.

The argument that, in the process of Xiao, only liquid portion is passed into the dewaxing step is not persuasive. Xiao teaches that the effluent (which includes vapor and liquid) from the hydrotreating step is entirely passed into the dewaxing step. (See col. 9, lines 4-5)

The argument that, merely listing something as an option does not mean that the option is to be selected (e.g., passing the entire effluent from the hydrotreating to the dewaxing step) is not persuasive. Xiao teaches that the effluent from the hydrotreating zone can be either passed entirely to the dewaxing zone or passed only the liquid portion to the dewaxing zone. Therefore, one of skill in the art would operate the process in either fashions including passing the entire effluent from the hydrotreating to the dewaxing step.

The argument that Xiao does not teach the use of ZSM-48 in the dewaxing step is not persuasive. The examiner relied upon either Lucien or Cody to teach that ZSM-5 and/or ZSM-48 can be utilized in a dewaxing process.

The argument that Xiao does not teach the used of MCM-41 in the hydrofinishing zone is not persuasive. The examiner relied upon Kresge to teach the use of MCM-41 as a hydrotreating catalyst.

The argument that new amended claim 8 does not include the use of ZSM-48 and ZSM-5, but only ZSM-48 catalyst in the dewaxing zone is not persuasive. Claim 8 claims that the dewaxing zone consisting essentially of ZSM-8 catalyst (in line 10 of the claim) and also claims that the dewaxing zone further contains ZSM-5 (in lines 14-15).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen
Examiner
Art Unit 1764

TN

Tam 6/16/06